



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,744	09/07/2000	David Triplett	04109/0100	1365

7590 06/04/2003

Stephen J Stark
Miller & Martin LLP
832 Georgia Avenue
Suite 1000 Volunteer Building
Chattanooga, TN 37402

EXAMINER

LEYSON, JOSEPH S

ART UNIT PAPER NUMBER

1722

DATE MAILED: 06/04/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/656,744	TRIPPLETT ET AL. <i>[Signature]</i>
	Examiner Joseph Leyson	Art Unit 1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 September 2000.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-38 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-38 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) <input type="checkbox"/> Other: _____.

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The full name of each inventor (family name and at least one given name together with any initial) has not been set forth.

The typed names in the declaration do not correspond to the signatures and/or to the typed names in other places in the specification. For example, is it Mr. Triplett or Mr. Tripplett? Note that Mr. Triplett signed with the middle initial "A" but no middle initial appears in the typed name in the declaration. The names in the declaration should be checked for proper spelling and correspondence to the signatures and to the rest of the application papers. The names in the filing receipt should also be checked and corrected if needed by filing a corrected filing receipt.

2. The disclosure is objected to because of the following informalities: The claim for benefit of the provisional application is not cross noted in the disclosure. The examiner suggests inserting after the title on p. 2 of the disclosure the following paragraph:

Art Unit: 1722

-- This application claims the benefit of provisional application 60/152,877, filed on September 8, 1999. -- Appropriate correction is required.

3. In the form PTO-1449 filed on 7 September 2000, the Titus Catalogue reference was crossed out and NOT considered because a copy was not provided.

4. Claims 1-15 and 23 are objected to because of the following informalities: in claim 1, line 3, "continuos" should be changed to --continuous--; and in claim 23, line 1, --at-- should be inserted after "is", for proper idiomatic language. Appropriate correction is required.

5. Claim Interpretation:

As to the recitation of "for use with an extruder" in instant claims 28-36, the "extruder" is understood by the examiner to be an intended use of the claimed apparatus because the body of these claims do not positively include the "extruder" mentioned in the preamble of the claims. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ

Art Unit: 1722

666. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitation of that claimed, *Ex parte Masham*, 2 USPQ 2d 1647.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 20, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites "The claim of claim" which is indefinite as to its metes and bounds. The examiner suggests changing it to --The machine of claim--.

Claim 26 recites "The mold block assembly" but the claim(s) upon which it is dependent recite "The machine" making it indefinite as to its metes and bounds. The examiner suggests changing "mold block assembly" in line 1 of claim 26 to --machine--.

Claim 27 recites "The mold block assembly" but the claim(s) upon which it is dependent recite "The machine" making it

indefinite as to its metes and bounds. The examiner suggests changing "mold block assembly" in line 1 of claim 26 to --machine--.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 29, 32-34 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Wonderen et al.(-071).

Van Wonderen et al.(-071) teach a mold block assembly for use with an extruder 30 and a machine with a plurality of pairs of mold block halves 12, 14, 16 operated in a continuous loop, that corresponds to the instant mold block assembly, which includes a carriage 64, guides 100, 102, and a first and a second mold block holder (figs. 7-9), the holders connected to opposing halves of the pairs of mold blocks halves 12, 14, 16, the guides 100, 102, 104, 106 operatively connecting the holders to the carriage 64 while allowing linear reciprocating movement of the holders and mold block halves relative to one another. A control actuator and piston cylinder assemblies 110, 112 define a coupling connected to the holders, wherein movement of a first

Art Unit: 1722

holder relative to the carrier in a direction moves the second holder relative to the carrier, wherein movement of the first holder towards a center portion of the carrier moves the second holder toward the center of the carrier (col. 4, lines 23-43). The piston cylinder assemblies can be replaced by rack and pinion drives, lead screws, chains (and inherently sprockets), and the like (col. 3, lines 52-55). The holders of the carriage 64 are connected to two mold halves of three mold block pairs 12, 14, 16.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-11, 13-18, 25-27 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berns et al.(-430) in view of Van Wonderen et al.(-071).

Berns et al.(-430) disclose a method and a machine cooperable with an extruder 40 to continuously mold an extrudable material into a product including a continuous, oval trackway (i.e., col. 5, lines 34-36; 126, 128) defining a path, a frame 22 supporting the trackway, a plurality of separate mold block assemblies abutting each other and restrained to travel about the trackway, and at least one pair of mold block halves 30 oriented to oppose one another and connected to each of the plurality of mold block assemblies, the mold block halves 30 capable of mating engagement to form a mold tunnel 34 and of opening to release the product. The mold block halves define two molding sections. The mold block assemblies include a carriage 50 and mold block holders 58, the holders 58 connected to opposing halves of the at least one pair of mold blocks halves 30, the carriage 50 restrained to travel substantially about the trackway. Means for controlling the speed of the

Art Unit: 1722

different carriages at different speeds is disclosed (col. 5, line 56, to col. 7, line 26). Raceways 66 are adapted to contact directors 64 connected to the holders 58 and to the mold block halves 30, the raceways 66 locating the mold block halves 30 relative to one another. Note that control by a programmable logic control device (i.e., a computer) is well within one of ordinary skill in the art. Motors 88 and 100 include drive rods (see fig. 2) which mechanically adapted to engage and move the mold block assemblies. The frame 22 sits upon rollers 26 and is movable. The carriage 50 is coupled to rollers 120, 122 restricted by the trackway which assist in carrying the weight of the mold block assemblies. However, it does not disclose the mold block assemblies as recited by the instant claims.

Van Wonderen et al. (-071) disclose a method and a machine cooperable with an extruder 30 to continuously mold an extrudable material into a product including a plurality of separate mold block assemblies restrained to travel about a continuous path, and at least one pair of mold block halves 12, 14, 16 connected to each of the plurality of mold block assemblies, the mold block halves 12, 14, 16 capable of mating engagement to form a mold tunnel and of opening to release the product. The mold block assemblies include a carriage 64, guides 100, 102, and mold block holders (see figs. 7-9), the

Art Unit: 1722

holders connected to opposing halves of the at least one pair of mold blocks halves 12, 14, 16, the carriage 64 restrained to travel substantially along a trackway 66, 68, the guides 100, 102 operatively connecting the holders to the carriage 64 while allowing linear reciprocating movement of the holders relative to the carriage 64, and linear bearings 104, 106, allowing linear movement, coupling the holders to the guides 100, 102. The mold block halves 12, 14, 16 are linearly displaceable from one another. A linear motor drive system for the carriage 64 has a stator 72 located proximate to the trackway 66, 68 and a rotor element 74, 76 connected to the mold block assembly.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the mold block assemblies of Berns et al. (-430) with elements of the mold block assemblies of Van Wonderen et al. (-071) because such modifications would provide art recognized alternatives for opening and closing mold halves on a carriage, such as linear opening and closing of mold halves on a carriage, and for driving carriages along a path, as disclosed by Van Wonderen et al. (-071).

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berns et al. (-430) in view of Van Wonderen et

Art Unit: 1722

al.(-071) as applied to claims 1-11, 13-18, 25-27 and 37 above, and further in view of Weppert et al.(-204).

Weppert et al.(-204) disclose a modular corrugator including circulating mold halves. The corrugator includes a modules or sections which can be removed or added to modify its production length.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the apparatus in sections because such a modification would enable its production length to be modified as disclosed by Weppert et al.(-204).

14. Claims 19 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berns et al.(-430) in view of Van Wonderen et al.(-071) as applied to claims 1-11, 13-18, 25-27 and 37 above, and further in view of Lupke(-663).

Lupke(-663) discloses cooling nozzles 57, 58 directing compressed air from blowers 59, 60 towards mold block halves to cool them.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the method and apparatus with cooling nozzles because such a modification would cool the mold halves after release of the product from the mold tunnel as disclosed by Lupke(-663).

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berns et al.(-430) in view of Van Wonderen et al.(-071) as applied to claims 1-11, 13-18, 25-27 and 37 above, and further in view of Lupke(-663) and Fulton(-229).

Lupke(-663) discloses cooling nozzles 57, 58 directing compressed air from blowers 59, 60 towards mold block halves to cool them.

Fulton(-229) discloses a cooling vortex nozzle 1 for providing cooling gas.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the apparatus with cooling nozzles because such a modification would cool the mold halves as disclosed by Lupke(-663) and to further modify the cooling nozzles to be cooling vortex nozzles because such vortex nozzles would alternatively provide cooling gas as disclosed by Fulton(-229).

16. Claims 21-24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berns et al.(-430) in view of Van Wonderen et al.(-071) as applied to claims 1-11, 13-18, 25-27 and 37 above, and further in view of Lupke(-663) and Jones(-758).

Lupke (-663) discloses a cooling system including cooling nozzles 57, 58 directing compressed air from blowers 59, 60 towards mold block halves to cool them.

Jones (-758) discloses molds 14 and a cooling system to cool the molds 14. The cooling system includes a mister 22 (col. 4, lines 26-34) and a vent (see fig. 1) connected to a blower 20 and spaced from the molds 14, the mister directing mist on a surface portion of the molds 14, the vent assisting in evaporating of the mist to lower the cooling temperatures (col. 4, lines 29-34). The mist includes water and air, and the water is at approximately 60°F (col. 4, lines 53-64). Note that it would be well within one of ordinary skill to modify the water temperature to modify the cooling rate.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the apparatus with the cooling system of Lupke (-663) because such a modification would cool the mold halves as disclosed by Lupke (-663) and to further modify the cooling system of Lupke (-663) with the cooling system of Jones (-758) because such a mister cooling system for cooling molds is known in the molding art as disclosed by Jones (-758) and because such a modification would provide an alternative means for cooling molds as disclosed by Jones (-758).

17. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (-758).

Jones (-758) teaches a cooling system, that corresponds to the instant cooling system, which includes molds 14, an extruder (see fig. 1) supplied by tank 10 for supplying molding material into the molds 14, a mister 22 (col. 4, lines 26-34) and a vent (see fig. 1) connected to a blower 20 and spaced from the molds 14, the mister directing mist on a surface portion of the molds 14, the vent assisting in evaporating of the mist to lower the cooling temperatures (col. 4, lines 29-34). The mist includes water and air (col. 4, lines 53-64). However, Jones (-758) does not disclose the molds being made of mold block halves.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the molds of Jones (-758) to be mold block halves because the mere fact that a given structure is integral does not preclude its consisting of various elements, Howard v. Detroit Stove Works, 150 U.S. 164; Nervin v. Erlichman, 168 USPQ 177.

18. Claims 30, 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Wonderen et al. (-071) in view of Berns et al. (-430).

Van Wonderen et al. (-071) disclose the apparatus substantially as claimed as mentioned in paragraph 9 above,

Art Unit: 1722

except for an adapter and a release lever enabling the holders to receive different sized mold block halves, as recited by the instant claims.

Berns et al.(-430) discloses adapters 58 that are easily removable (i.e., have release means) so that different sized adapters can be used for different sized mold block halves (col. 5, lines 12-16).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the mold block assembly of Van Wonderen et al.(-071) with adapters and release means because such a modification would enable the holders to receive different sized mold block halves as disclosed by Berns et al.(-430).

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hegler(-679: col. 5, lines 6-8) discloses spraying molds with water to cool them. Hegler et al.(-618), Comfort(-321), Hegler(-347), Hegler et al.(-941) and Dietrich et al.(-044) are cited as of interest.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (703) 308-2647. The examiner can normally be reached on M-F(8:30-6:00) First Friday Off.

Art Unit: 1722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

h

jl

May 31, 2003

James Mackey
JAMES P. MACKEY
PRIMARY EXAMINER

6/2/03